McCoy, Erin

From: Jackson, Hylton [DNR] <Hylton.Jackson@dnr.iowa.gov>
Sent: Monday, August 03, 2015 9:07 AM
To: Keith Delange; Scott.Heemstra@vogelpaint.com
Cc: Nicoski, Dan; Richards, Robert; McCoy, Erin; Lundberg, Cal [DNR]
Subject: RE: Comments on Vogel 2015 Semi-Annual Groundwater Monitoring Report

Scott and Keith,

Please find the forwarded EPA comments on the 2015 Semi-Annual Groundwater Monitoring Report for the Vogel site in Maurice, Iowa. These comments were submitted to the Iowa DNR on July 22, 2015 following a phone conference between EPA and the Iowa DNR which occurred on July 22, 2015. Most of the issues covered by EPA's comments were discussed during that phone call and, in general, the Department concurs with EPA. Iowa DNR presently has two main concerns at this site;

1. Groundwater plume assessment of dissolved solvents. This includes the number and placement of monitoring wells and the sample collection procedures/protocols. In order to evaluate plume stability, some additional down gradient wells may have to be considered in order to define extent. It is understood that in order to provide useful data, some of these monitoring wells may have to be located in areas where only temporary wells would be allowed. Please provide a brief work plan proposing temporary well locations (to be sampled in the fall of 2015 and early spring of 2016) for review. Also, include in the work plan the possible locations of additional permanent monitoring wells that may help define the plume extent/stability. The switch from collecting a bailed groundwater sample (as in the past) to using passive diffusion bag (PDB) samplers needs to be addressed with a work plan/QAAP modification. This modification shall provide specifics to insure proper and consistent sample collection for each individual well sampled (well screened intervals, PDB placement depths and PDB resident times, etc. Please complete and submit the proposed QAAP modification before the next sampling event. EPA recommends rejecting the March and May analytical results. The QAPP modification shall contain proposed procedures for verifying and correlating current and future sampling results with the historic data. Please note that, while not recommended, an alternative would be to return to collecting bailed samples. For the next groundwater sampling event, please sample the 18 wells sampled during the May 2015 event plus TC-22S, TC-22D, GMW-6, and MW-5.

2. The ROD and associated ESD calls for active remediation and/or groundwater plume control for this site. Progress will need to be made on developing plans to address groundwater contamination both in the source area and down gradient. Vogel's 2014 Annual Report suggests an alternative to restarting the currently inactive air stripper. This proposal calls for replacing the air stripper with a shallow tray air stripper. Please submit estimated influent/effluent contaminant concentrations and a construction time schedule for this option if installation would be approved/required. You may also want to evaluate the possibility of using the air sparge/soil vapor extraction option for addressing source area contamination. Two in-situ remedial options for addressing the down gradient contamination are mentioned in the report. Please develop a pilot study/studies for these plans. Please submit a time line/schedule for the remedial options. Regardless of the approaches chosen, an additional ESD or a ROD amendment will have to be completed.

HYLTON JACKSON Environmental Specialist

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From: McCoy, Erin [mailto:McCoy.Erin@epa.gov]
Sent: Wednesday, July 22, 2015 9:37 AM
To: Jackson, Hylton [DNR]
Cc: Nicoski, Dan; Richards, Robert
Subject: Comments on Vogel 2015 Semi-Annual Groundwater Monitoring Report

Hylton, per our meeting on Monday, here are the EPA comments on the Vogel 2015 Semi-Annual Groundwater Monitoring Report. Let me know if you have any questions. Also, please include cc me when you forward EPA and IDNRs comments to Vogel so I can have a copy of both for our records. Thanks!

General Comments

Differences in the March/May groundwater analytical results were apparent in several wells and may be due to passive diffusion bag (PDB) placement (vertical variability) rather than concentrations within the well. The introduction needs to list the depth where samples were collected, how long the PDBs were allowed to equilibrate in the well, etc. Also, three of the samples collected in May were from bags placed above the screened interval, which would not allow adequate groundwater flow through for the analysis to be viable and therefore **are likely NOT representative of conditions in the gravelly sand**. Because of the lack of approved quality assurance project plan (QAPP), placement of PDB's above the well screen, and inconsistency between sampling depths between events and PDB/HydraSleeve placement, EPA recommends IDNR reject the March and May analytical results. **Prior to the next sampling event, a QAPP, field sampling plan (FSP), and/or work plan describing how the PDBs and Hydrosleeves will be used to sample needs to be submitted.**

If vertical variability needs to be tested to determine where to place the PDBs, multiple PDBs/HyraSleeves should be installed in the same well during the same sampling event. Also, since the sampling method has been switched, sampling the wells using both the new and old method during the same sampling event would provide comparative data and is highly recommended.

What statistics were used to perform the statistical analysis? Statistical trends need to be performed on analytical data instead of trend lines. Several free programs are available and are used frequently on groundwater data to determine stability.

The contamination is discussed for each well, but not for the site as a whole. There is no discussion of potential seasonal fluctuation, if increases or decreases in concentration are associated with the potentiometric surface, or change in plume size over time. **The discussion of the reports should be more focused on the site a whole instead of individual wells.**

The text notes that recent results indicate additional PDB sampling should be completed prior to determining if remedial action is warranted. **The higher site groundwater concentrations warrant an active remedial action be initiated sooner rather than later. A work plan should be submitted to outline work necessary to select a remedial action. The work plan should include a projected time line with measurable progress targets.**

The proposed use of in-situ remedial technologies parallels the southern property line. Nether of the injection remedial alternative propose treating the source area. Will any attempt be made to treat other portions of the site? Additional wells may be needed to adequately determine COC concentrations entering and leave this treatment zone. Have soil

tests such as sieve analysis or bench testing been performed to determine if the soil where injection would likely occur will accept the material or if the injection material will work on the contaminants? The groundwater should also be analyzed for parameters that could potentially inhibit the effectiveness of the selected technology (check with the selected vendor).

Air sparge/soil vapor extraction may be an option to remediate the source area. EPA suggests evaluating this method to determine if it can be used for source treatment.

Specific Comments

Page 3, Section GMW-33 – There are two reasons for the installation of this well. The way the text is written, the purposes conflict with each other. Update the wording to better outline why the well was installed.

Page 3, Section GMW-7R, Sentence 3 – There is a typo in 'sampling'.

Page 4, Section GMW-19, Sentence 4 – *BTEX MCLs have not been exceeded at this location.* Ethylbenzene exceed the MCL in 2010.

Page 6, Free Product Recovery – Bailing stirs up the free product in the well, limiting the amount of free product that can be removed. EPA recommends using a peristaltic pump to remove the free product more effectively.

Table 1 – Please review the table information for wells GMW-15 through GMW-20. The first one to four events listed are for other wells.

Table 2 – Why are some of the metals samples filtered and some are not?

Table 3 should include the well construction information for well TC-7.

Figure 2, Groundwater Contour Map (Based on the May 2015 static water level elevations)

- Table 1 indicates well TC-7, rather than well GMW-1, with a groundwater elevation of 1277.60 ft; however, the figure shows the elevation on well GMW-1. Re-evaluate contours on northern portion of the site.
- The figure shows a water level reading for well MW-1; however Table 1 does not present one.
- Several wells depicted on the figure in this area are without groundwater elevations. The addition of those elevations may present a clearer flow pattern.
- It is unlikely that the change in groundwater flow direction (nearly 90 degrees) in the area of wells GMW-30/GMW-35 thru 37 is as abrupt as depicted on the figure. Review and revise as appropriate.

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